

REMARKS

Claims 1-3, 5, 8-9, and 12-15 are pending. Claims 4, 6-7, 10-11, and 16 were previously cancelled. Claims 1 and 9 are amended herein. Support for the amendments can be found throughout the written description, claims, and drawings as originally filed. Therefore, no new matter has been added. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 103

Claims 1, 5 and 9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pat. No. 6,396,824 ("Schilling") in view of U.S. Pat. Pub. No. 2001/0020216 ("Lin").

Claim 2 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Schilling in view of Lin and further in view of U.S. Pat. No. 5,943,248 ("Clapp").

Claims 3 and 8 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Schilling in view of Lin and further in view of U.S. Pat. No. 3,568,066 ("Fujimura").

Claims 12-13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Schilling in view of Lin and further in view of U.S. Pat. No. 7,183,971 ("Lloyd").

Claim 14 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Schilling in view of Lin and Lloyd and further in view of U.S. Pat. No. 6,538,599 ("David").

Claim 15 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Schilling in view of Lin and further in view of U.S. Pat. No. 6,470,044 ("Kowalski").

As the Examiner is well aware, In order to establish a case of obviousness, there must be an apparent reason by which a skilled artisan would combine prior art references, as set forth by *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1734, 82 USPQ2d 1385, 1391 (2007) (An obviousness inquiry includes determining “whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.”). The basis for the combination may be found in the references themselves or in the general knowledge in the art; however, the apparent reason to combine or modify the references should be made explicit in order to facilitate review. *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. at 1740-41, 82 USPQ2d at 1396; and see *In re Kahn*, 441 F3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning to support the legal conclusion of obviousness.”).

The foregoing rejections are respectfully traversed.

Claim 1 as now amended recites that the carrier tracking processing is performed using an open-loop device, instead of being performed by using frequency lock-loop (FLL), as claim 1 previously recited. Claim 9 has been amended similarly. For example only, page 14 of the present application states that, as an alternative to closed-loop tracking devices (e.g., the FLL loops and the DLL loop), “open-loop devices may be provided in which the error signals output from the discriminators 19 and 21 are used only periodically (and not continuously as in the case of closed-loop tracking devices) by devices for estimating the carrier and codes phase or frequency.”

As previously described in Applicant's Amendment/Response, and as the Examiner acknowledges, Shilling fails to disclose: (1) determining Doppler velocity aid using a discrete navigation system that does not rely only on the radio navigation signals, wherein the discrete navigation system combines information from the radio navigation signals with other information that is independent of the radio navigation signals or (2) code tracking processing performed using a delay-lock loop (DLL). (See p. 4-5 of the present Office Action)

In addition to failing to teach (1), Applicant respectfully notes that Shilling fails to teach or suggest (a) code tracking processing performed using a delay-lock loop (DLL) or an open-loop device or (b) carrier tracking processing performed using an open-loop device as claim 1 now recites. As best understood by Applicant, Lin fails to make up for the deficiencies of Shilling.

More specifically, Applicant respectfully asserts that Lin fails to teach or suggest code tracking processing or carrier tracking processing performed using **open-loop** devices. Instead, as best understood by Applicant, Lin only teaches use of **closed-loop** devices. For example, paragraph [0050] of Lin states that "the IMU-derived velocity and acceleration (V-A) information can be used to aid a GPS receiver's code and carrier phase **locked-loops** for tracking the Doppler-drifted satellite signals." (Emphasis added). However, as best understood by Applicant, Lin is silent as to code tracking processing or carrier tracking processing performed using open-loop devices as claim 1 now recites.

Code tracking processing or carrier tracking processing performed using open-loop devices as claim 1 now recites makes it possible to perform estimation of the

carrier and codes phase or frequency without implying any feedback. This feature may render the claimed system and method quite advantageous over Shilling and Lin, both individually and in combination. As described above in conjunction with page 14 of the present application, the error signals output from the discriminators 19 and 21 are used only periodically by open-loop devices as opposed to being used continuously in the case of closed-loop tracking devices. As best understood by Applicant, Shilling and Lin, individually and in combination, do not teach or suggest use of open-loop devices.

Applicant submits that there is no apparent reason to combine the art of record to arrive at the invention as now claimed. More importantly however, even if the art is properly combinable, one would not arrive at the invention as now claimed.

For at last the above reasons, Applicant respectfully asserts that claim 1 should be allowable. Independent claim 9 includes similar limitations and should therefore be allowable for at least similar reasons. The remaining claims depend from claim 1 or claim 9 and should therefore be allowable for at least similar reasons.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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